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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,180	12/21/2001	Robert A. Nickels	M10-02642 US	9493

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EXAMINER

PYO, KEVIN K

ART UNIT PAPER NUMBER

2878

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,180

Applicant(s)

NICKELS ET AL

Examiner

Kevin Pyo

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Specification

1. The disclosure is objected to because of the following informalities: On page 8, line 11, "36" should be changed to --56--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henson et al in view of applicant's Prior art Fig.3 (hereinafter Prior Art).

Regarding claims 1 and 14, Henson et al shows in Figs. 2 and 2a the following elements of applicant's invention: a) detecting module (36) for detecting light that was interrupted by an object (A1-An) moving on a conveyor (12) utilizing at least one optical component (36) when

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the object enters a sensing zone; and b) conditioning module (35) for conditioning the light to provide an output signal, which is utilized to provide controlling information necessary to route the object to a proper location and prevent damage to the object from other objects as the object is being transported upon the conveyor (col.3, lines 36-51).

Henson et al differs from the claimed invention in that its devices utilizes a light barrier type sensing scheme for detecting an object (Henson discloses that a photocell 36 is positioned on one side of each modular zone with a reflector 37 being positioned on the opposite side so that an article moving along the conveyor system 10 breaks the light beam and provides a signal that the article is present; col.7, lines 21-25), whereas the claimed invention utilizes a reflective type sensing scheme for detecting an object. However, the use of a reflective type sensor for detecting an object is well known in the art as shown in Prior Art, and it would have been obvious to one of ordinary skill in the art to replace the light barrier type sensor of Henson et al with the reflective type sensor of Prior Art in view of increasing flexibility in positioning sensors in the conveyor system of Henson et al.

Regarding claims 2, 3, 15 and 16, the limitations therein are disclosed in Prior Art.

Regarding claims 4, 5, 17 and 18, the specific distance measured by the device of Henson et al in view of Prior Art would have been obvious to one of ordinary skill in the art in view of design requirements, the specific lens used, the desired performance, etc.

Regarding claims 6-9, 13, 19-22, and 26, Prior Art shows an optical emitter (70), an optical receiver (72) and an associated optical lens (64).

Regarding claim 10 and 23, although the device of Henson et al in view of Prior Art does not specifically mention that a housing is used to contain optical elements, it would have been

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obvious to one of ordinary skill in the art to place optical elements in a housing in view of reducing any dusts or dirt from mounting on optical elements.

Regarding claims 11 and 24, the limitation therein is shown in Fig.2 of Henson et al.

Regarding claims 12 and 25, although the device Henson et al in view of Prior art does not specifically mention that an amplifier is used to amplify a signal from an optical receiver, it would have been obvious to one of ordinary skill in the art to use an amplifier to amplify a signal from an optical receiver in view of improving a signal to noise ratio.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Itoh et al is cited for disclosing a conveyor system performing zero pressure accumulation operation.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is 703-308-4841. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'Kevin Pyo', written in a cursive style.

Kevin Pyo
Primary Examiner
Art Unit 2878

Pkk
12/26/03